

PATENT ABSTRACTS OF JAPAN

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(54) TEMPERATURE MEASURING APPARATUS FOR HIGH TEMPERATURE MOLTEN BODY

(57)Abstract:

PURPOSE: To perform simply and inexpensively temperature measurements of high temperature molten bodies in a variety of states with good precision by composing a detection end which is made of a transparent body and can be immersed into a high temperature molten body and a radiation thermometer which is connected to the detection end.

CONSTITUTION: A temperature measurement apparatus 10 is composed to have a detection end 11 which is made of a quartz rod as a rod-shaped transparent body and can be immersed into a high temperature molten body, and a radiation thermometer 12 which is indirectly connected to detection end 11 through a connection cable 13. Connection cable 13 is constructed by an optical fiber. In connection cable 13, a part connected to detection end 11 is covered by a radiation heat sheltering cover 14 to prevent radiation heat of a high temperature molten body from reaching connection cable 13.

Moreover, the quartz transparent body constructing detection end 11 is strong in duration and also in heat impact. However, because the quartz is weak in anti-heat strength, in the case of type or to protect it by a strengthening protection tube.

